

Serial No. 10/606,863

Attorney Docket No. 11-165

LISTING OF CLAIMS:

The following listing of claims replaces all previous versions and listings in the present application.

1. (Previously presented) A load drive control system having a control apparatus, and a drive apparatus which performs driving of a load based on a control signal supplied from said control apparatus, wherein

said control apparatus comprises means for producing a power supply enabling control signal and for selectively supplying said power supply enabling control signal to a signal input point in said drive apparatus, and for selectively varying a control parameter of said power supply enabling control signal, and

said drive apparatus comprises a drive signal output section and a power supply enabling control section that respectively receive said power supply enabling control signal from said signal input point, said power supply enabling control section being adapted to set an internal circuit thereof in a conducting condition to thereby enable supplying of electrical power from a drive power source to said drive apparatus while said power supply enabling control signal is being supplied from said control apparatus and to set said internal circuit in a non-conducting condition to thereby interrupt said supplying of electrical power when said power supply enabling control signal ceases to be supplied from said control apparatus, and said drive signal output section being responsive to said control parameter of said power supply enabling control signal for controlling driving of said load in accordance with a value of said control parameter.

2. (Previously presented) A load drive control system according to claim 1, wherein

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said control apparatus produces said power supply enabling control signal as a pulse width modulation (PWM) signal, and wherein said control parameter is a duty ratio of said PWM signal.

3. (Currently amended) A load drive control system according to claim 2,

wherein

said drive signal output section of said ~~control~~drive apparatus is adapted to operate on an input signal applied thereto which varies between a common ground potential level of said control apparatus and drive apparatus and a fixedly predetermined voltage level, and

said control apparatus comprises a high-side switching element which is coupled to said signal input point in said drive apparatus, an internal DC power supply for producing a supply voltage at said predetermined voltage level, and means for generating said drive control signal by repetitively connecting and disconnecting said signal input point in said drive apparatus to and from said internal DC power supply.

4. (Previously presented) A load drive control system according to claim 3,

wherein said power supply enabling control section of said drive apparatus comprises an integrator circuit for integrating said PWM signal to thereby produce an integrated voltage,

a first switching element coupled to said integrator circuit, for being set in a conducting condition when said integrated voltage is being derived from said PWM signal and set in a non-conducting condition when supplying of said PWM signal is terminated, and

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a second switching element, connected to said drive power source and controlled by said first switching element for supplying electrical power from said drive power source to said drive signal output section while said first switching element is in the conducting condition and for interrupting said supplying of electrical power while said first switching element is in the non-conducting condition.

5. (Currently amended) A load drive control system having a control apparatus, and a drive apparatus which performs driving of a load based on a control signal supplied from said control apparatus, wherein

said control apparatus comprises a low-side switching element coupled to a signal input point within said drive apparatus, and means for driving said low-side switching element in accordance with a pulse width modulation (PWM) signal to output a power supply enabling control signal by repetitively connecting and disconnecting said signal input point to and from a common ground potential of said control apparatus and drive apparatus,

wherein said drive apparatus comprises

a drive signal output section comprising control signal processing and output means coupled to receive said power supply enabling control signal, for outputting a drive signal for driving said load, in accordance with a duty ratio of said PWM signal, and control signal detection means coupled to said signal input point, for selectively generating an internal control signal in accordance with whether ~~[[aid]]~~said power supply enabling control signal is being supplied,

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power supply enabling control means controlled by said internal control signal for selectively enabling and interrupting a supply of DC electrical power at a first predetermined voltage level from a drive power source to said drive signal output section, and

signal level lowering means controlled by said internal control signal for setting a maximum level of said power supply enabling control signal at a second predetermined voltage level that is lower than said first predetermined voltage level, while said power supply enabling control signal is being supplied.

6. (Canceled)

7. (Previously presented) A load drive control system according to claim 5, wherein said power supply enabling control means of said drive apparatus comprises

a first switching element connected to said drive power source and having a control input terminal thereof coupled to said signal input point, adapted to be thereby set from a non-conducting condition to a conducting condition when said power supply enabling control signal begins to be supplied from said control apparatus and thereby beginning to supply electrical power to said drive signal output section,

a second switching element, adapted to be set in a conducting condition when said first switching element enters the conducting condition and to be thereafter held in said conducting condition until supplying of said power supply enabling control signal is terminated, said second switching element coupled to control said first switching element such as to maintain said first

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switching element continuously in the conducting condition while said power supply enabling control signal is being supplied,

and wherein said signal level lowering means comprises

a zener diode having a cathode thereof connected to said signal input point, and

a third switching element connected to an anode of said zener diode, controlled to be set in the conducting condition together with said first switching element, for thereby establishing a conducting path through said zener diode to said ground potential.

8. (Previously presented) A load drive control system according to claim 7, wherein said second switching element is controlled by said internal control signal for being held continuously in the conducting condition while said power supply enabling control signal is being supplied.

9. (Previously presented) A load drive control system according to claim 7, wherein a control input of said third switching element is coupled to said first switching element for thereby being connected to said second voltage level while said first switching element is in the conducting condition, said third switching element being thereby held continuously in the conducting condition while said power supply enabling control signal is being supplied.